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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,531	07/07/2003	James D. Roberts	TWC-1999	9004
7590	01/13/2005		EXAMINER	
Patrick J. Viccaro Allegheny Technologies Incorporated 1000 Six PPG Place Pittsburgh, PA 15222-5479			PAHNG, JASON Y	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N .	Applicant(s)
	10/614,531	ROBERTS, JAMES D.
	Examiner	Art Unit
	Jason Y Pahng	3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/1/2004.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The abstract of the disclosure is objected to because the abstract may not exceed 150 words in length, as required by 37 CFR 1.72(b). Correction is required.

The disclosure is objected to under 37 CFR 1.71, as being nonstatutory description. In the specification or drawings, there is no description of how a milling machine selectively rotates the arbor (108). Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: It appears that the phrase, "rotatable arbor" in line 7 should be "a rotatable arbor."

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, a milling

machine selectively rotating the arbor, which was not described in the specification.

See the above objection to the specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 10, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rousseau (US 6,827,304).

With regard to claim 1, Rousseau discloses a comminuting apparatus and its process including:

1. a cutting chamber (local region above 30 and comprising 30) comprising a first and second members (30);
2. the first member (a portion of 30, Figure 7) and the second member (a portion of 30, Figure 7) forming an angle (42, Figure 7) therebetween;
3. the first and second members (30) include slots (34);
4. a rotatable arbor (50) disposed outside the interior volume of the cutting chamber; and
5. a plurality of toothed blades (54);

With regard to claim 2, Rousseau discloses an end (41a) of a first member and an end (41b) of a second member. Rousseau's cutting chamber inherently discloses recesses which accommodate the ends (41a, 41b) of the first and second members.

With regard to claim 4, Rousseau discloses a housing (14, 20) enclosing the cutting chamber and the arbor.

With regard to claim 10, Rousseau discloses a collection hopper (21).

With regard to claim 11, Rousseau discloses slots (34) which provide access to a bottom portion of the cutting chamber.

Claims 1, 4, 11, and 12 are alternatively rejected under 35 U.S.C. 102(b) as being anticipated by Prentice (US 4,678,126). Prentice discloses a first member (24) and second members (26), a rotatable arbor (40) with blades (52, 54), and an interior volume (above line 34).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prentice (US 4,678,126). Prentice does not specifically recite the size of the crushed particles, but claim 12 calls for the crushed particle size to be no greater than mesh size 10. It is an ordinary engineering to set the crushed particle size to any suitable size. Therefore,

it would have been obvious to one skilled in the art at the time the invention was made to provide Prentice with any suitable crushed particle size, including that of no greater than mesh size 10, as such would be a mere matter of a simple design choice.

Claims 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prentice (US 4,678,126) in view of Anderson (US 2,853,247), Schymura (US 4,221,341), and Petersen (US 4,641,787). Claims 3, 7, and 8 call for routine and conventional features well known in the art. Claims call for an insert feature (claim 3), a coolant channel (claim 7), and an inert gas inlet (claim 8). For example, in a closely related art, Anderson discloses an insert feature (71), Schymura discloses a coolant channel (7), and Petersen discloses an inert gas inlet (column 2, lines 35-37; Figure 1). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Rousseau with any nominal well known features, including an insert feature for an anvil, a coolant channel to cool a comminuting member, and an inert gas inlet to prevent explosion, as taught by Andersen, Schymura, and Petersen.

Claim 5, as well as can be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Rousseau (US 6,827,304). Rousseau discloses a housing (14, 20) which is capable of being supported on a table. It would have been obvious to one skilled in the art of comminuting apparatus at the time the invention was made to provide Rousseau with a nominal milling machine table or a comminuting machine table. Furthermore, it is an obvious ordinary engineering to use any suitable machine to rotate the arbor.

Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rousseau (US 6,827,304) in view of Cavalieri (US 6,666,395) and Greager (US 361,000). Claims 6 and 9 call for routine and conventional features well known in the art. Claim 6 calls for a cleaning roller for cleaning blades and claim 9 calls for spacers for spacing the blades. For example, in a closely related art, Cavalieri discloses a cleaning roller (column 3, lines 38-41) to clean blades and Creager discloses spacers (page 1, lines 61-66) to space the blades. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Rousseau with any nominal well known features, including a cleaning roller in order to clean blades and spacers in order to space blades, as taught by Cavalieri and Greager.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prentice (US 4,678,126) in view of Cramer (US 4,004,739) and Ikeda (US 5,918,820). Claim 13 calls the material to be crushed to consist of zirconium, titanium, magnesium, niobium, calcium, copper, potassium, hafnium, and aluminum. Prentice discloses a crushing device with substantially all of the claimed structure with the exception of specifically reciting the material to be crushed. It is well known and conventional to use a crushing device comprising a rotor with blades and a stator in order to crush brittle materials such as titanium and copper with. For example, Cramer discloses crushing titanium (column 2, lines 13-21) and Ikeda discloses crushing copper. Therefore, it would have been obvious to one skilled in the art at the time the invention made to modify Prentice to crush brittle materials, including titanium or copper, as such would be a matter of an ordinary engineering design, as taught by Cramer and Ikeda.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Y Pahng whose telephone number is 571 272 4522. The examiner can normally be reached on 9:00 AM - 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on 571 272 4521. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JYP

  
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